

Notice of Allowability	Application No.	Applicant(s)	
	10/534,195	KNEPLER, JOHN T.	
	Examiner	Art Unit	
	Vinod D. Patel	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8-15-06.
2. ☒ The allowed claim(s) is/are 1-6, 10-12 14,-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Lazarus on 3/16/07.

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application:

1. (currently amended) An electronic thermostat of for
~~use with~~ a heated beverage dispenser having a container in
which liquid is contained and a heater that is operable by
electrical power to heat the liquid, the electronic thermostat
comprising:

a mechanical switch through which electrical power is
applied to the heater to increase a temperature of the liquid
from an initial temperature toward a target temperature;

a solid-state switch in parallel with the mechanical
switch through which electrical power is applied to the heater
to maintain the temperature of the liquid at substantially the
target temperature; and

a controller, wherein the controller is programmed to
implement a partial or complete proportional-integral-

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derivative algorithm for controllably heating liquid to produce a beverage, the controller being coupled to the mechanical switch and the solid-state switch.

2. (previously presented) A method of heating a beverage dispenser, the method comprising:

operating a mechanical switch to a closed circuit mode to apply power to a heater to heat the liquid from an initial temperature toward a target temperature, then opening the mechanical switch; and

operating a solid-state switch to a closed circuit mode to apply power to the heater to maintain the liquid substantially at the target temperature;

wherein the mechanical switch in parallel with the solid-state switch and are controlled by, and coupled to a controller and wherein the controller is programmed to implement a partial or complete proportional-integral-derivative algorithm for controllably heating liquid to produce a beverage.

3. (currently amended) ~~In~~ A beverage brewing apparatus comprising, an electronic thermostat, ~~for use with~~ a heated beverage dispenser having a container in which liquid is

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contained and a heater that is operable by electrical power to heat the liquid, the electronic thermostat comprising:

a mechanical switch through which electrical power is applied to the heater to increase a temperature of the liquid from an initial temperature toward a target temperature;

a solid-state switch in parallel with the mechanical switch through which electrical power is applied to the heater to maintain the temperature of the liquid at substantially the target temperature; and

a controller, wherein the controller is programmed to implement a partial or complete proportional-integral-derivative algorithm for controllably heating a liquid to produce a beverage, the controller being coupled to the mechanical switch and the solid-state switch.

4. (currently amended) A method of heating a liquid in ~~for use with~~ a heated beverage dispenser, the method comprising:

operating a mechanical switch to apply power to a heater to heat the liquid from an initial temperature toward a target temperature;

operating a solid-state switch in parallel with the mechanical switch to apply power to the heater to maintain the liquid substantially at the target temperature; and

the mechanical switch and the solid-state switch being controlled by, and coupled to a controller, wherein the controller is programmed to implement a partial or complete proportional-integral-derivative algorithm for controllably heating liquid to produce a beverage.

5. (currently amended) An electronic thermostat kit in combination ~~for use~~ with a heated beverage dispenser having a container in which liquid is contained and a heater that is operable by electrical power to heat the liquid, the electronic thermostat kit comprising:

a mechanical switch through which electrical power is applied to the heater to increase a temperature of the liquid from an initial temperature toward a target temperature;

a solid-state switch in parallel with the mechanical switch through which electrical power is applied to the heater to maintain the temperature of the liquid at substantially the target temperature; and

a controller, wherein the controller is programmed to implement a partial or complete proportional-integral-

derivative algorithm for controllably heating liquid to produce a beverage, the controller being coupled to the mechanical switch and the solid-state switch.

6. (currently amended) An electronic thermostat in combination ~~for use~~ with a heated beverage dispenser having a container in which liquid is contained and a temperature modifier that is operable by electrical power to at least one of heat or cool the liquid, the electronic thermostat comprising:

a mechanical switch through which electrical power is applied to the temperature modifier to change a temperature of the liquid from an initial temperature toward a target temperature;

a solid-switch in parallel with the mechanical switch through which electrical power is applied to the temperature modifier to maintain the temperature of the liquid at substantially the target temperature; and

a controller, wherein the controller is programmed to implement a partial or complete proportional-integral-derivative algorithm for controllably heating liquid to produce a beverage, the controller being coupled to the mechanical switch and the solid-state switch.

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7-9. (canceled)

10. (currently amended) The ~~method~~ apparatus of claim

[[9]] 14, further comprising;

~~providing~~ anti-arcing measuring device ~~measures~~

~~before~~ for closing the mechanical switch to prevent arcing

between the contacts of the mechanical switch.

11. (previously presented) The ~~method~~ apparatus of claim

10, wherein the anti-arcing measuring device ~~measures~~

includes means closing the solid-state switch briefly before

applying electrical power to the heater by closing the

mechanical switch.

12. (currently amended) The ~~method~~ apparatus of claim

[[9]] 14, wherein the mechanical switch is of lower resistance

than the solid-state switch.

13. (canceled)

14. (currently amended) ~~An apparatus for heating a liquid~~

~~beverage~~ A liquid beverage heating apparatus comprising;

a container for the liquid beverage;

a heater inside the container, the heater being

operable by electrical power to heat the liquid in the

container;

an electronic thermostat comprising:

a mechanical switch through which electrical power is applied to the heater to increase a temperature of the liquid from an initial temperature toward a target temperature;

a solid-state switch in parallel with the mechanical switch through which electrical power is applied to the heater to maintain the temperature of the liquid at substantially the target temperature; and

a controller, wherein the controller is programmed to implement a partial or complete proportional-integral-derivative algorithm for controllably heating liquid to produce a beverage, the controller being coupled to the mechanical switch and the solid-state switch.

15. (previously presented) The apparatus of claim 14 further comprising a temperature sensor that senses the temperature of the liquid in the container and provides feedback to the controller.

16. (previously presented) The electronic thermostat of claim 14 further comprising a sensor that senses the level of the liquid in the container and provides feedback to the controller.

17. (previously presented) The electronic thermostat of claim 1 further comprising a temperature sensor that senses the temperature of the liquid in the container and provides feedback to the controller.

18. (previously presented) The electronic thermostat of claim 1 further comprising a sensor that senses the level of the liquid in the container and provides feedback to the controller.

19. (previously presented) The apparatus of claim 2 wherein the target temperature is approximately 200 degrees Fahrenheit.

20. (previously presented) The apparatus of claim 2 wherein the liquid is maintained at a temperature in the range of 180 - 210 degrees Fahrenheit.

21. (currently amended) The apparatus of claim ~~[[9]]~~ 14, wherein the target temperature is approximately 200 degrees Fahrenheit.

22. (currently amended) The apparatus of claim ~~[[9]]~~ 14, wherein the liquid is maintained at a temperature in the range of 180 - 210 degrees Fahrenheit.

Allowable Subject Matter

2. Claims 1-6, 10-12 and 14-22 are allowed.

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3. The following is an examiner's statement of reasons for allowance.

The prior art of record does not teach to one of ordinary skill in the art, in combination with the other limitations of the independent claims, an electronic thermostat or a method of heating a liquid/beverage dispenser comprising a solid-state switch in parallel with mechanical switch and coupled to a controller wherein the controller is programmed to implement a partial or complete proportional-integral derivative algorithm for controllably heating a liquid to produce a beverage.

The instant application is deemed to be a non obvious improvement over Mariotti (US6907680) relates to a method for drying laundry and machine implementing such method. Maritti discloses a mechanical switch in parallel with a solid state switch but does not discloses a controller programmed to implement a partial or complete proportional-integral derivative algorithm for controllably heating a liquid to produce a beverage. EP 0648992 A1 discloses a process for drying clothes comprising proportional-derivative control device. With respect to Mariotti (US6907680) and EP 0648992 A1, in the examiner's opinion, it would not have been obvious to a person skill in the art to provide a mechanical switch in parallel with a solid state switch as taught by Mariotti (US6907680) and a proportional-derivative control device as taught by EP 0648992 A1 for heating a liquid to produce a beverage, since the cited prior art is clearly directed to drying laundry.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

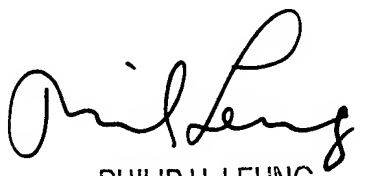
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod D. Patel whose telephone number is 571-272-4785. The examiner can normally be reached on 7.30 A.M. TO 4.00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Leung can be reached on 571-272-4782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VP


Vinod Patel
Patent Examiner


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